

両地域にあっては、労働市場においても競争が激しく、結婚や出産を先送りする傾向も指摘されている。

3. 出生力低下に起因する諸問題と政府の対応

(1) 労働力不足への対応

シンガポールおよび香港における長期的な出生力の低迷は、日本の状況と類似しており、両地域とも人口高齢化や労働力不足といった問題に懸念を表明している。しかし、両地域は歴史的に大量の流入人口を抱え、「国民」以外の「永住者」が多く存在することから、人口減少や労働力不足といった問題に対する政府の姿勢も、日本と自ずと異なっている。このことは、両地域の出生政策にも少なからず影響を及ぼしていると考えられる。

置換え水準を下回る出生率が20年近く続いている両地域ではあるが、低い死亡率と人口モメンタムによって自然増加率はプラスになっている。シンガポールの自然増加率は1980年代で約1.2%、90年代に入っても1%前後であったが、置換え水準以下の低出生率が続いているために自然増加率も低下し続けており、2002年には0.7%となった。香港では合計特殊出生率が置換え水準に達した1980年前後の自然増加率が1%強であったが、低下の一途をたどり、2001年には0.22%となっている。一方日本では1970年代半ばに1.2%の自然増加率であったが、2001年に0.16%にまで低下している。ちなみに東京の自然増加率は0.12%で、香港を下回っている。

両地域の総人口は人口流入の影響を受け高い増加率を示している。シンガポールでは90年代以降約2%平均で人口が増加しており、香港でも1%前後で増加している。ちなみに、日本および東京の2000-2001年における人口増加率は0.29%と0.62%である。 (①,

②)

(2) 出生力低下への政府の対応

シンガポール政府はこのような人口増加の状況下においても出生率の低下に対して大きな懸念を示している。アジア諸国の中にあつて出生促進政策を公言する希有な国である。1987年から始まる「経済的に可能な場合、3人以上」を促進する誘引施策、2001年に実施されたベビー・ボーナス制度等、政府の積極的な介入がみられる。主な施策として、所得税制上の優遇措置、進学優先制度、育児休業制度、看護休暇制度、保育料の補助、公共部門におけるパートタイム雇用、出産・育児関連費用に対する福祉積立金の使用、公的住宅への優先入居権など多岐多様にわたっている。政策の根本には人口の“質”低下への懸念があり、高学歴で社会的に優秀と考えられている人ほど子どもを産まない、という事実に基づいている。シンガポール政府が実施している諸施策は、学歴や収入、民族の違いを考慮して策定されたものも少なくない。諸施策の立案の背景とその目的、および出生力におよぼす実際の効果に関しては今後詳細に分析をおこなう。

香港はイギリス植民地時代からレッセフェールを標榜し、税制や福祉予算等の面では自

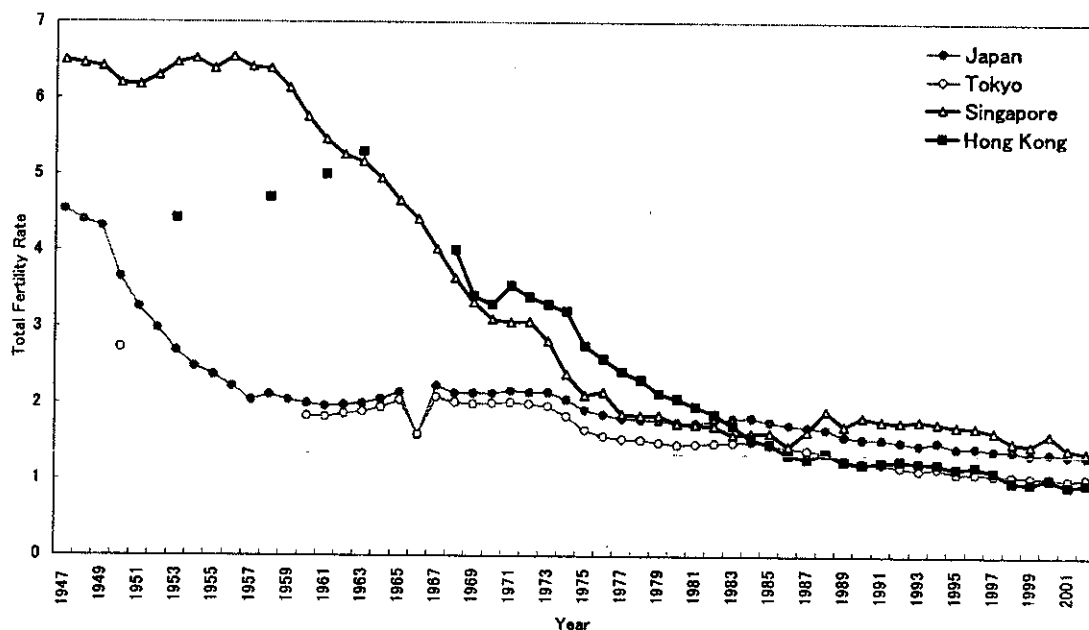
由市場への介入を最小限にとどめている“小さな政府”である。現在の“超”低出生を回復に導くための施策は全くといっていいほど存在しない。2003年2月に香港政庁が人口政策を発表したが、その中に出生率回復のための施策は盛り込まれておらず、主として優秀な労働力確保のための諸提案がなされている。出生率回復のための政策がとられていない香港では、社会的・経済的要因が直接出生力に影響を及ぼしている可能性が高い。例えば、香港では中国返還以前から労働集約型の製造業が急速に ASEAN および中国本土へと低廉なコストを求めて流出した。この分野での女性の就業機会が大きく低下するとともに、代わって女性就業の受け皿となったサービス産業における賃金が低いことから、女性の平均収入は低下し、生活が不安定化したことが結婚を遅らせ、出生力を低下させる要因の一つとなったと考えられる。

両政府の低出生への対応には大きな違いが見られるが、育児・教育および女性の継続就労のための実質的な支援を施しているのが夫婦の親と外国人メイドというインフォーマルなセクターであり、公的な支援は極めて少ないという共通点が見られる。人々の実際の育児や就労の形態と育児・労働支援の関連についても今後の課題としたい。

図表

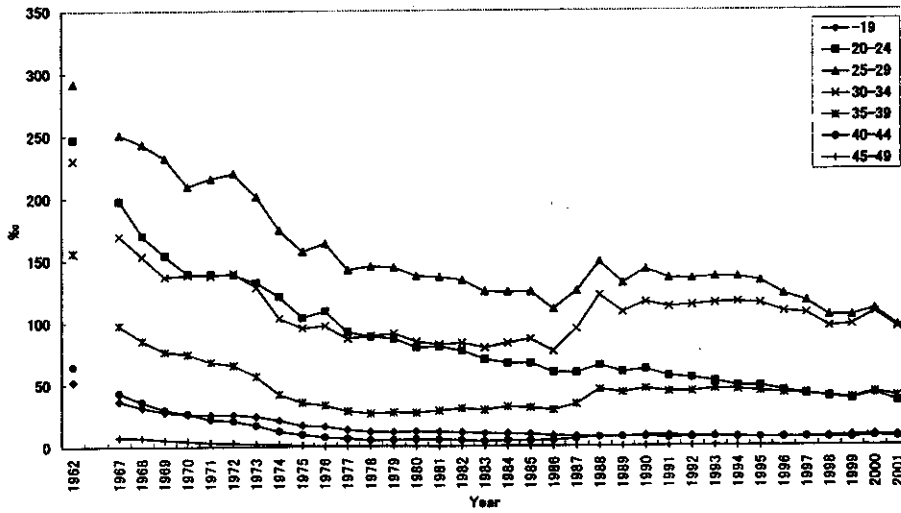
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Total Fertility Rate

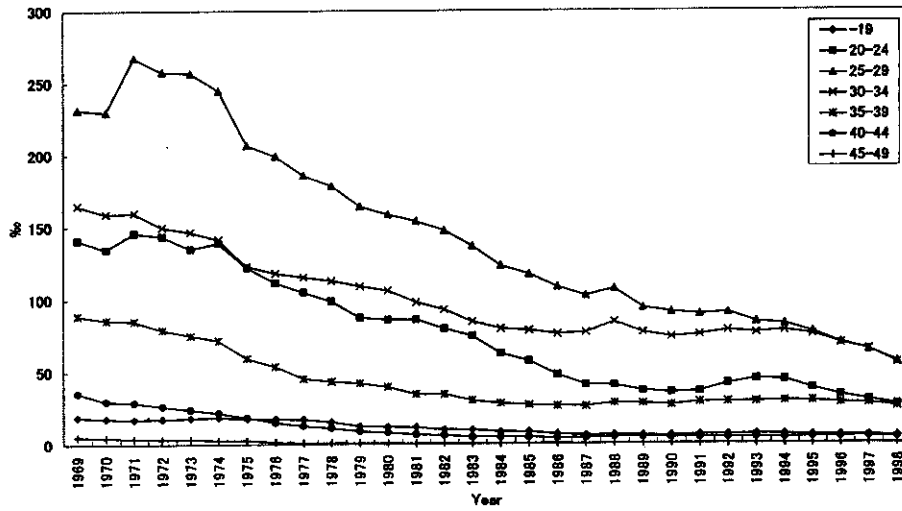


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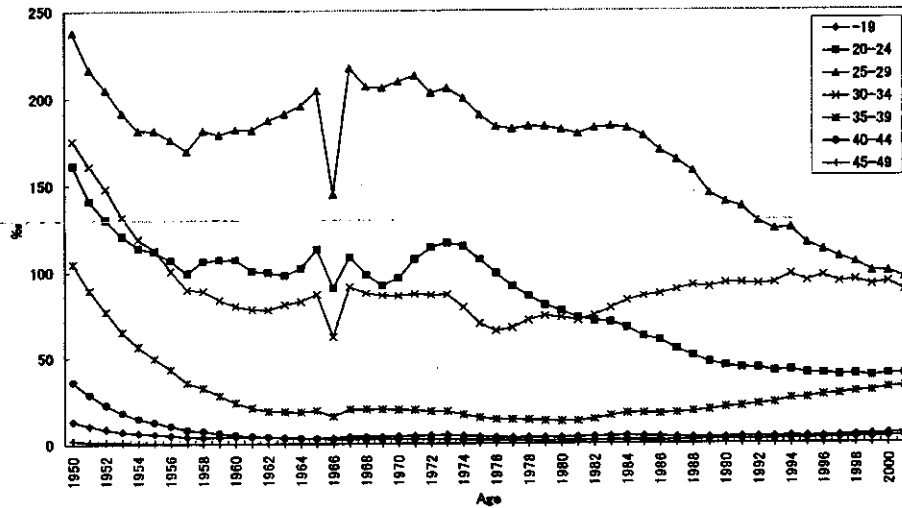
Age specific fertility rate Singapore



Age specific fertility rate Hong Kong

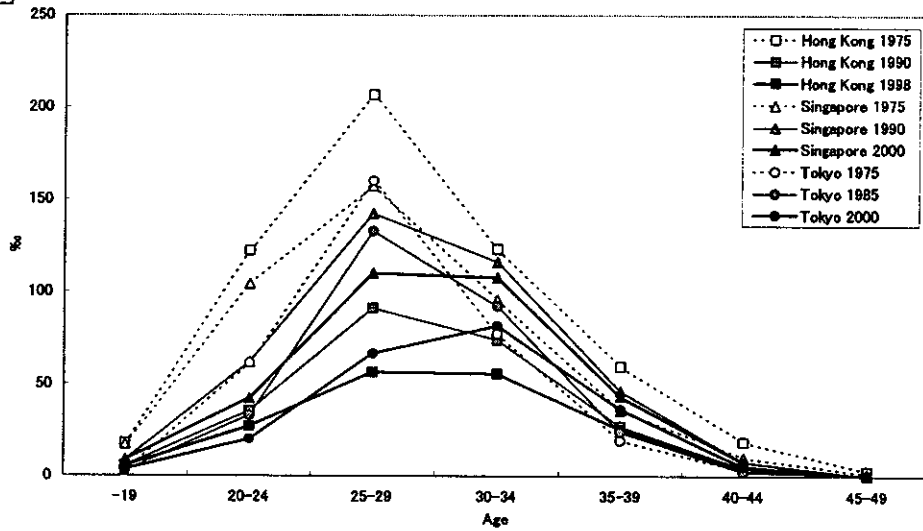


Age specific fertility rate Japan



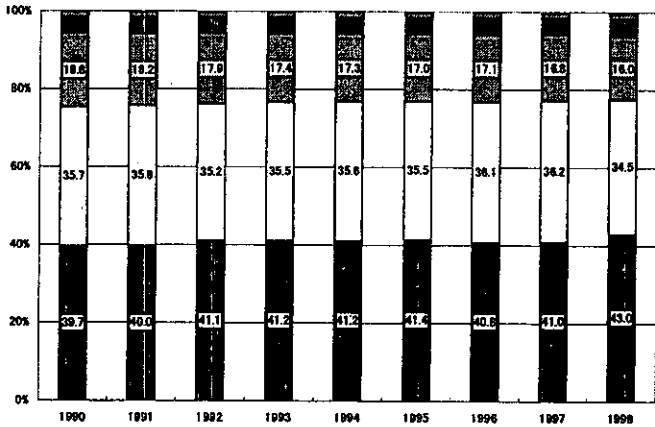
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Age specific fertility rate for three regions

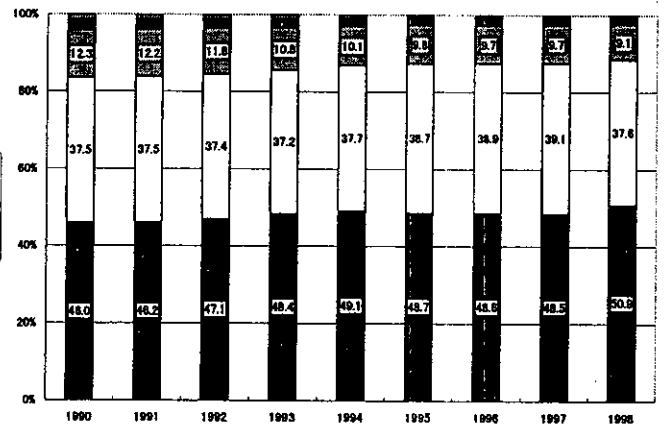


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Distribution of Birth Order Singapore

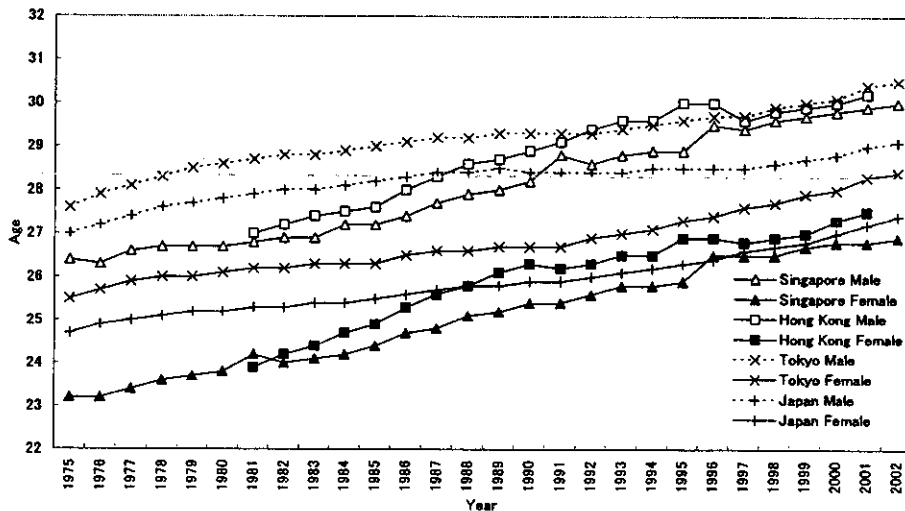


Distribution of Birth Order Hong Kong



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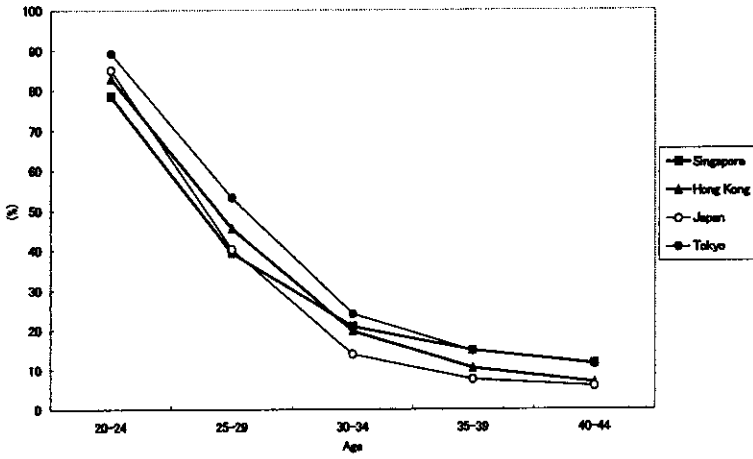
Mean age at first marriage



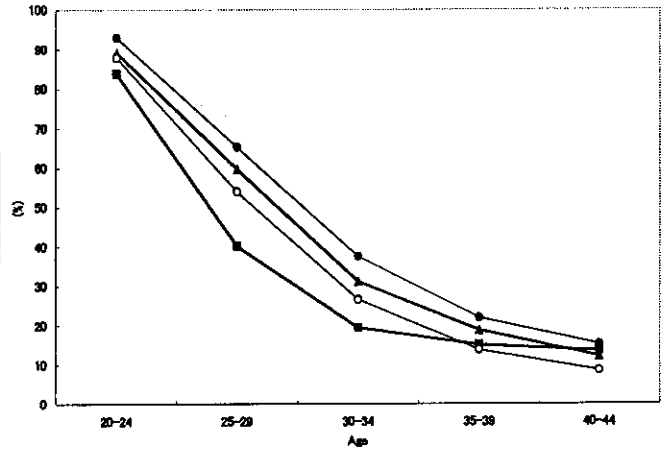
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Percentage of Never Married

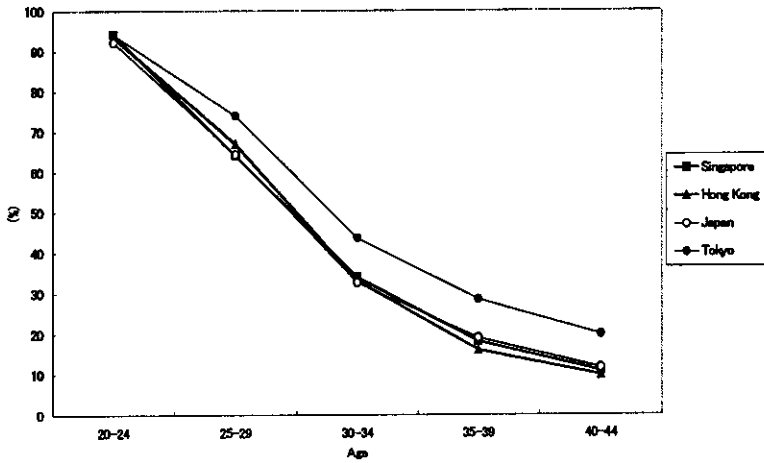
Female 1990



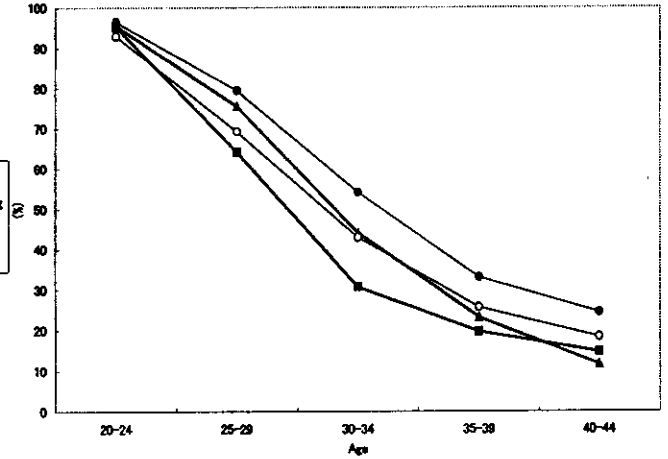
Female 2000



Male 1990



Male 2000



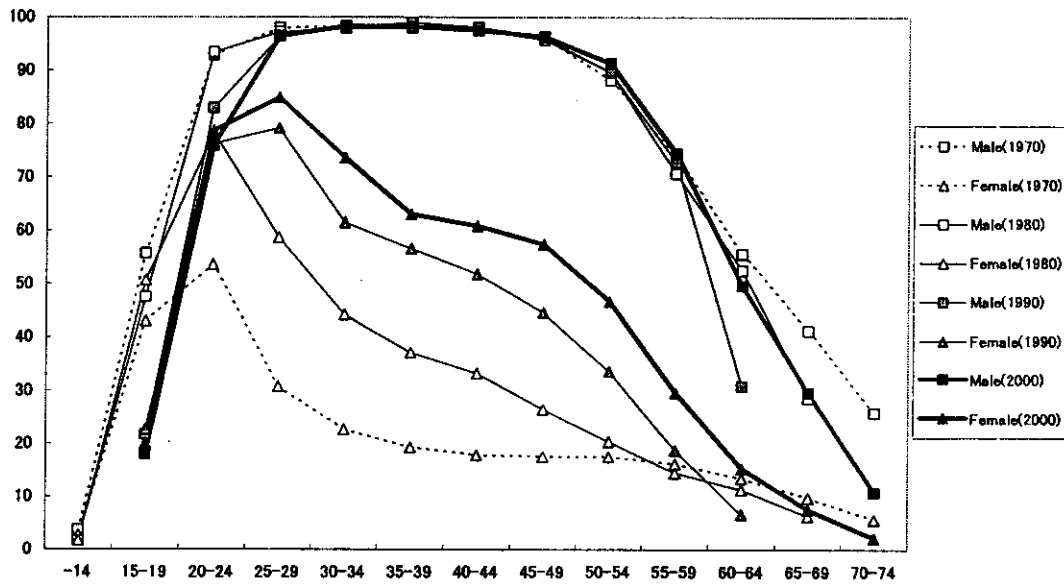
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Proportion of Tertiary Education Attainment (Highest Level Attended)

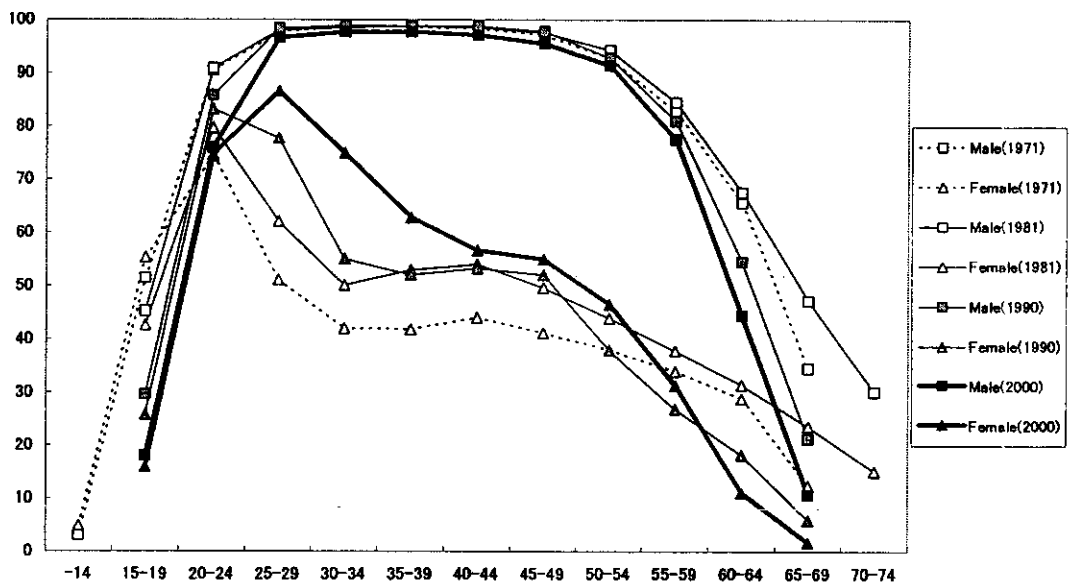
| | Singapore(2000) | Hong Kong (2001) | Tokyo (2000) |
|-------|-----------------|------------------|--------------|
| 25-34 | 26.5 | 28.7 | 24.4 |
| 35-44 | 18.9 | 14.8 | 22.7 |
| 45-54 | 12.2 | 7.6 | 15.2 |

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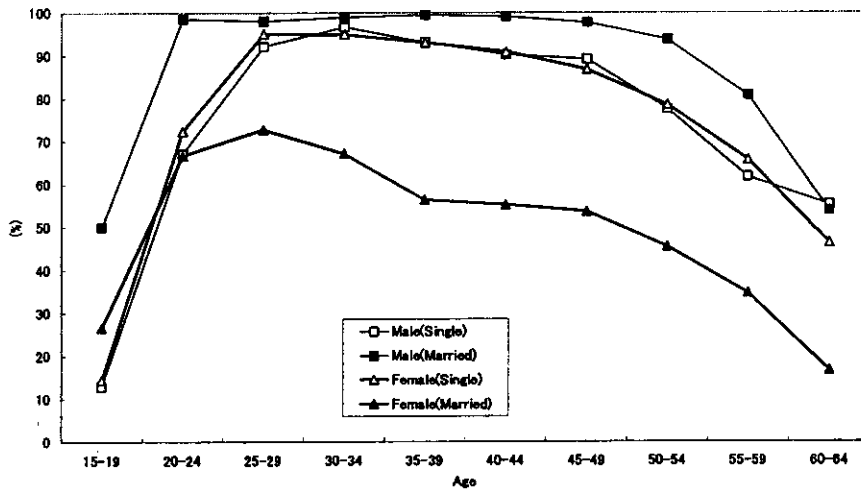
Labour force participation rate Singapore



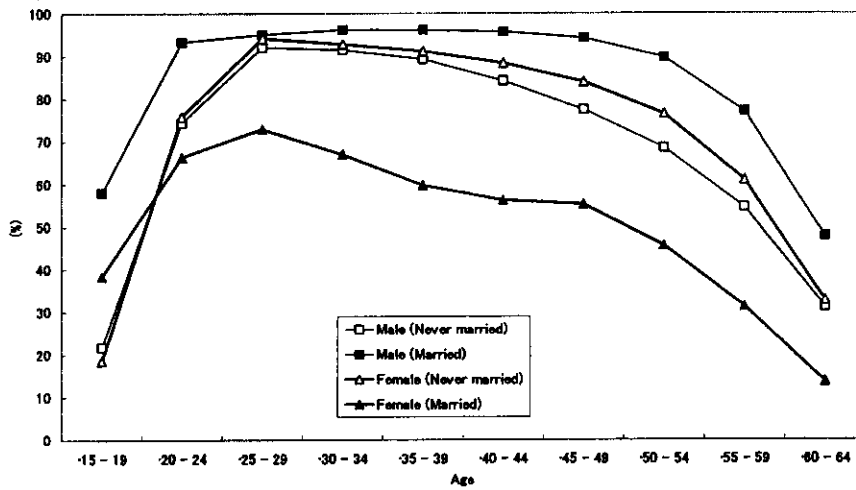
Labour force participation rate Hong Kong



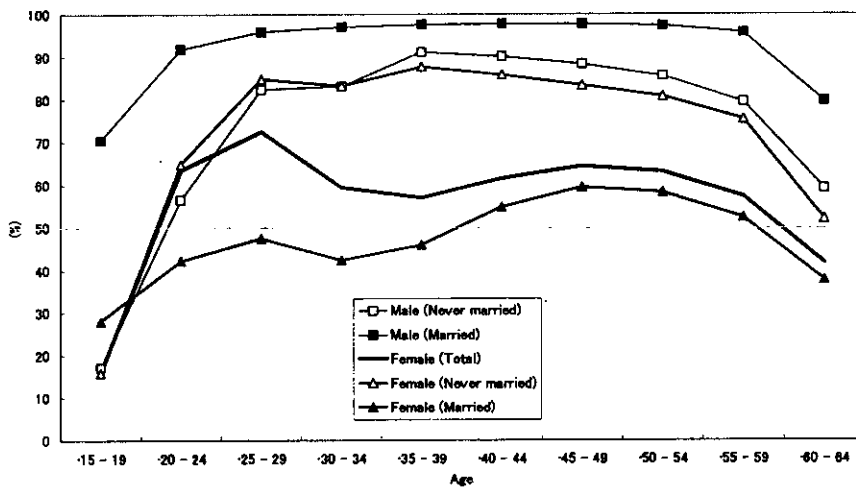
Labour force participation rate by marital status 2002



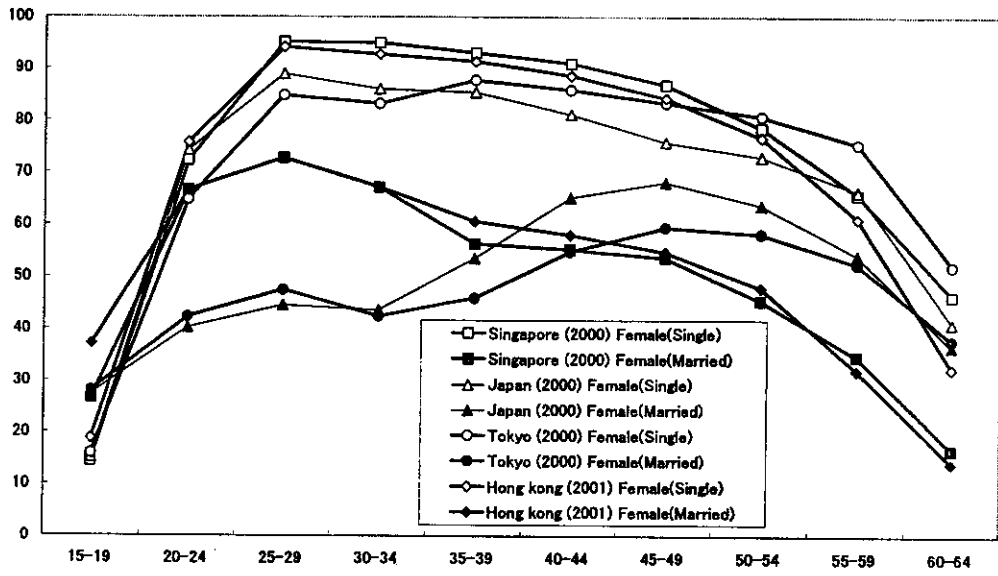
Labour force participation rate by marital status Hong Kong 2001



Labour force participation rate by marital status Tokyo 2000



Labour force participation rate by marital status



(参考)

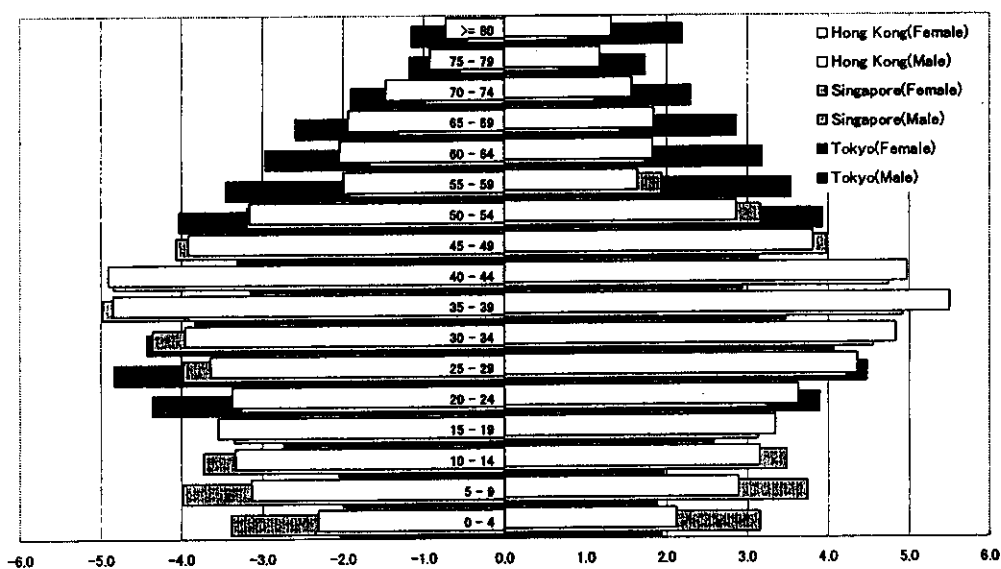
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Population Density

| | Kong Kong | Singapore | Tokyo |
|------|-----------|-----------|-------|
| 1970 | 3540 | 3538 | 5328 |
| 1980 | 3910 | 3907 | 5388 |
| 1990 | 4770 | 4814 | 5430 |
| 2000 | 6050 | 5885 | 5517 |

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Population Age Structure 2000



Data sources:

Hong Kong Annual Digest of Statistics

Yearbook of Statistics Singapore

ILO, Yearbook of Labour Statistics

Ministry of Health, Labour and Welfare, Vital Statistics of Japan

Fertility and Population Policy: the Singapore Experience

Introduction

Singapore has long been known for its use of social policies to influence fertility/reproductive behaviour. This began in the late 1960s/early 1970s and continues to the present, although the demographic objective has changed from anti-natalist to selectively pro-natalist. The turning point came in the mid-1980s after about a decade of below-replacement level fertility. The impetus must have been the results of the 1980 census, which showed that the better-educated women were not replacing themselves while the lower educated “over-reproduced”. The better-educated women were, moreover, more likely to remain single. The then Prime Minister, Mr Lee Kuan Yew, was as concerned about the quality of the population as the quantity¹. Incentives were introduced to encourage the better-educated mothers to have at least three children. On 1 March 1987, the then First Deputy Prime Minister (and current Prime Minister) Mr Goh Chok Tong announced the replacement of the two-child policy which had been in effect since 1972 with the “three, or more if you can afford it” policy, together with a package of procreation incentives. These incentives have been modified and added on to over the years, most recently with the government giving out “baby bonuses” for second and third births and picking up the tab for paid

¹ Lee Kuan Yew (1983), “Talent for the Future”. Prepared text delivered at the National Day Rally on 14 August 1983. Reproduced as Appendix A, pp 39-46, in Saw Swee Hock (1990), *Changes in the Fertility Policy of Singapore*, IPS Occasional Paper No. 2, Singapore: Times Academic Press for the Institute of Policy Studies.

maternity leave for third births. As in the past, the government feels that while marriage and family sizes are private matters, there are important larger societal consequences that concern the survival of Singapore which justify intervention – even as it also recognises the dismal record of procreation incentives elsewhere (see Lien 2002)².

The section that follows provides a backgrounder on Singapore's demographic landscape and its transition from extremely high fertility (exceeding six children per woman) to well below replacement level. This is followed by a presentation of the measures introduced to date to address the problem of persistent low fertility, and finally, an impact assessment and prognosis for the future.

Demographic Trends and Patterns

Singapore is a small island city-state with a land area of about 682 sq km. The total population of about 4.16 million (as at mid-2002) comprises about 3.38 million citizens and permanent residents, and 785,400 foreigners. Reflecting the history of in-migration, the population is multi-racial in composition, with 77% Chinese, 14% Malays, 8% Indians and about 1% Others (see Leow 2001 for ethnic classification)³. The three major ethnic

² Laurence Lien (2002), *Marriage and Procreation: To Intervene or Not – A Policy-making Perspective*. Paper presented at the International Workshop on Fertility Decline, Below Replacement Fertility and the Family in Asia: Prospects, Consequences and Policies, organised by the Asian MetaCentre for Sustainable Development Analysis and the Family Studies Research Programme, National University of Singapore, Singapore, 10-12 April 2002.

³ The definition of ethnicity as given in the census of population is as follows: "Ethnic group refers to a person's race. Those of mixed parentage are classified under the ethnic group of their fathers. The population is classified into the following four categories:
Chinese: this refers to persons of Chinese origin such as Hokkience, Teochews, Cantonese, Hakkas, Hainanese, Hockchias, Foochows, Henghuas, Shanghainese, etc.
Malays: this refers to persons of Malay or Indonesian origin, such as Javanese, Boyanese, Bugis, etc.

groups differ significantly in terms of their demographic and other socioeconomic characteristics. For example, the Malays have the highest fertility rate and the largest family sizes and the Chinese the lowest, with the Indians occupying an intermediate position. On the other hand, the Chinese as a group has the highest level of socioeconomic attainment, followed by the Indians and the Malays, in rank order. This diversity makes population planning more much complex, and perhaps more interesting.

There were reportedly 150 people (120 Malays and the rest Chinese) on the island when it was founded by Thomas Stamford Raffles in 1819⁴. Immigration from China, India and the countries surrounding Singapore was the main factor contributing to population growth until the 1940s. Singapore experienced an extended post-war baby boom that lasted until the mid-1960s. At its peak in 1957, the Total Fertility Rate reached more than six children per woman. The TFR fell to nearly five children per woman in 1965 when Singapore became a fully independent nation, after two years as a state of Malaysia. Rapid economic and social development and the implementation of a highly successful national family planning programme brought the TFR down to replacement level in 1975/76 and fertility has remained below replacement level since 1977. The TFR reached an unprecedented low of 1.4 children per woman in 1986, the phenomenon commonly attributed to economic recession (the first since independence) and the inauspicious year

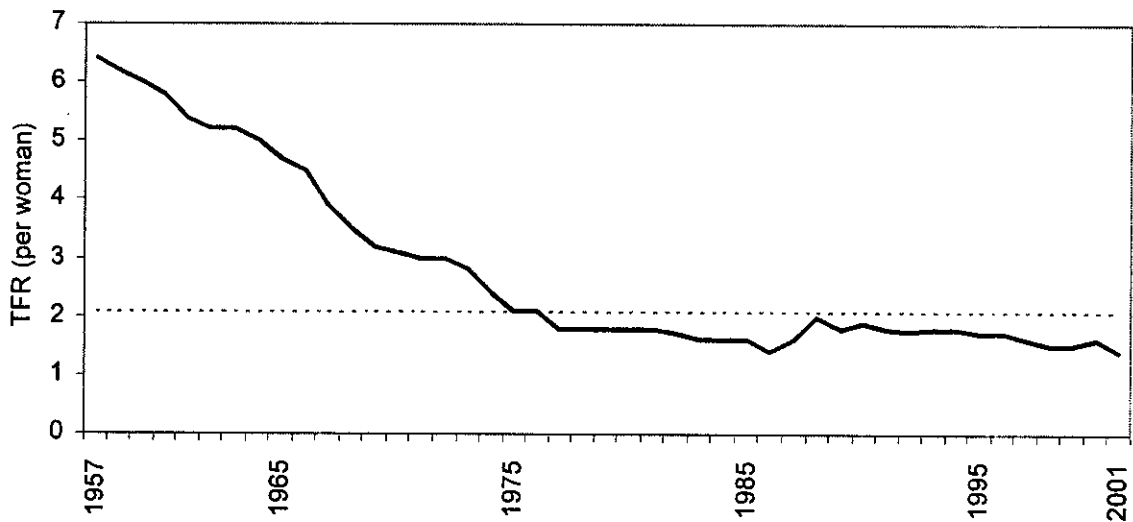
Indians: This refers to persons of Indian, Pakistani, Bangladeshi or Sri Lankan origin such as Tamils, Malayalis, Punjabis, Bengalis, Singhalese, etc.

Other Ethnic Groups: This comprises all persons other than Chinese, Malays and Indians. They include Eurasians, Europeans, Arabs, Japanese, etc." (Leow Bee Geok [2001], Census of Population 2000 Advance Data Release, Singapore: Department of Statistics.

⁴ This section on Singapore's demographic history draws heavily on Saw Swee Hock (1991), "Population Growth and Control", Chapter 10 in A History of Singapore, edited by Ernest CT Chew and Edwin Lee, Singapore: Oxford U Press.

of the Tiger. The TFR as well as total births rose sharply in the late 1980s following the introduction of the new, selectively pro-natalist population policy in 1987. The TFR reached a high of 1.96 children per woman in 1988 and remained above the pre-1987 level of about 1.6 children per woman for about a decade until the late 1990s. It fluctuated, falling to 1.5 in 1998/99 and then rising to 1.6 in 2000 before falling to a new low of 1.41 in 2001. The peak in 1988 is most likely due to a confluence of several factors, besides the reversal of the anti-natalist policy. These factors include the favourable zodiac, the Dragon year, and the fact that the figure "88" is homonymic with double prosperity in some Chinese dialects. It is also a year of economic recovery after the mid-1980s recession. The last two years of the 1990s as well as the beginning of the 2000s saw the Singapore economy swing between recession and 10 per cent growth, first as a result of the Asian Financial Crisis and then the global economic slowdown. It may be noted that while 2000 was a Dragon year, the TFR of 1.6 remained below the level reached twelve years earlier in 1988. The recession in 2001, when real GDP dipped by over 2 per cent, is Singapore's worst since independence.

Total Fertility Rate 1957-2001



Singapore has been experiencing the effect of smaller cohorts of new labour force entrants over the last two decades. The situation has probably been made worse by extended education⁵. Since the 1980s, Singapore has been relaxing its immigration policy to facilitate the entry of a growing number of qualified foreigners to work and live in the country to make up for the shortfall in births and to meet labour force needs⁶. They are encouraged to

⁵ Census 2000 results show that 57 per cent of non-student resident population had secondary and higher qualifications, 15 percentage points higher than in 1990. The share of university graduates also increased from 4.5 per cent to 12 per cent over the same period. Among citizens, the proportion with university qualifications increased from 1 in 25 to 1 in 10 while the share with upper secondary or polytechnic qualifications increased from 11 to 21 per cent. Also, more people upgraded post-school, with the increase being most marked for the prime working ages 25-39 years. This could have important fertility implications. See Leow Bee Geok (2001), *Census of Population 2000 Advance Data Release*, Singapore Department of Statistics, for more information on the changing educational attainment of the population over the last decade.

⁶ Foreigners may work in Singapore on two main types of work passes: the Employment Pass for those with tertiary degrees, professional qualifications or track record as entrepreneurs/investors and Work Permit for those who do not have the necessary qualifications and who command monthly salaries of not more than \$2500. Different conditions apply, for example, as to whether they can bring their family members. Employers

take up permanent residency and even citizenship in the country. In addition, a growing number of unskilled and semi-skilled workers have also to be brought in to fill jobs where it has been particularly difficult to recruit local workers, typically the dirty, difficult and dangerous jobs in the marine, construction, services and domestic service industries. These are, however, granted only short-term permits lasting two-three years and not eligible for long term residency in the country. According to the results of Census 2000, about 19 per cent of the total population were non-resident foreigners living, working or studying in Singapore, another 7 per cent were permanent residents and only 74 per cent were citizens. Currently, non-citizens make up a considerably larger proportion of the population compared even to 1990 when foreigners made up only 10 per cent of the total population, permanent residents about four per cent and 86 per cent were citizens. Immigration has helped to raise the level of educational attainment of the resident population. According to Leow (2001 p 20), "Among the non-student permanent residents, 33 per cent were university graduates and another 24 per cent had post-secondary qualifications. The education profile of the permanent residents had improved markedly since 1990 when only 14 per cent were graduates".

of WP holders also have to pay a levy, the amount depending on the level of skills of the workers.

Population and Annual Growth

| | Number (thousands) | | | Average Annual Growth Rate (%) | | |
|------|-----------------------|----------|--------------|-----------------------------------|----------|--------------|
| | Total | Resident | Non-Resident | Total | Resident | Non-Resident |
| 1970 | 2,074.5 | 2,013.6 | 60.9 | 2.8 | NA | NA |
| 1980 | 2,413.9 | 2,282.1 | 131.8 | 1.5 | 1.3 | 8.0 |
| 1990 | 3,047.1 | 2,735.9 | 311.3 | 2.4 | 1.8 | 9.0 |
| 2000 | 4,017.7 | 3,263.2 | 754.5 | 2.8 | 1.8 | 9.3 |
| 2001 | 4,131.2 | 3,319.1 | 812.1 | 2.8 | 1.7 | 7.6 |
| 2002 | 4,163.7 | 3,378.3 | 785.4 | 0.8 | 1.8 | -3.3 |

Source: Tan Yeow Lip, "Singapore's Current Population Trends", Statistics Singapore Newsletter September 2002, p 2, Table 1, and Latest Indicators (www.singstat.gov.sg/keystats/annual/indicators.html).

Notes:

Non-residents refer to foreigners staying or working in Singapore for one year or more. Growth rates refer to growth during the previous decade. For 1970, total population growth refers to growth during 1957-1970. For 2001 and 2002, GR refers to growth over the previous year.

Total Population by Residential Status

| Residential Status | Number (thousands) | | Per Cent | | Ave Ann. Growth (%) |
|--------------------|--------------------|---------|----------|-------|---------------------|
| | 1990 | 2000 | 1990 | 2000 | |
| Total | 3,047.1 | 4,017.7 | 100.0 | 100.0 | 2.8 |
| Residents | 2,735.9 | 3,263.2 | 89.8 | 81.2 | 1.8 |
| <i>Citizens</i> | 2,623.7 | 2,973.1 | 86.1 | 74.0 | 1.3 |
| <i>PRs</i> | 112.1 | 290.1 | 3.7 | 7.2 | 10.0 |
| Non-Residents | 311.3 | 754.5 | 10.2 | 18.8 | 9.3 |

Source: Leow Bee Geok (2001), *Census of Population 2000 Advance Data Release*, Singapore: Dept of Statistics, p 4, Table 1.

Ethnic differential in fertility

As mentioned, Singapore's three main ethnic community communities vary significantly in their reproductive behaviour with the Malays having the highest fertility rates and the largest family sizes, followed by the Indians and lastly, the Chinese. Fertility for all three ethnic groups fell to replacement level in the mid-1970s; however, while the Malay TFR rose to replacement level and beyond, the Chinese and Indian TFRs continued on a downward trend. The Chinese TFR reached 1.2 children per woman in 2001.

Total Fertility Rate by Ethnic Group (per woman)

| | Total | Chinese | Malays | Indians |
|------|-------|---------|--------|---------|
| 1980 | 1.82 | 1.73 | 2.19 | 2.03 |
| 1990 | 1.83 | 1.65 | 2.69 | 1.89 |
| 2000 | 1.60 | 1.43 | 2.54 | 1.58 |
| 2001 | 1.41 | 1.21 | 2.45 | 1.50 |

Source: Tan (2002), p 5, Table 4, except for 1980 which is drawn from Population Report 1998 (Singapore Ministry of Health, Population Planning Section).

Average Number of Children Born by Resident Ever-Married Women Aged 40-49, 1990 and 2000

| | 1990 | 2000 |
|-------------------|------|------|
| All Ethnic Groups | 2.8 | 2.2 |
| Chinese | 2.6 | 2.1 |
| Malays | 3.5 | 2.8 |
| Indians | 2.9 | 2.2 |
| Others | 2.2 | 1.9 |

Source: Leow Bee Geok (2001), Census of Population 2000 Advance Data Release, Singapore Department of Statistics, Tables 6 and 7.

Educational differential in fertility

As mentioned in the introduction, it was the educational differential in fertility that provoked the initial change in procreation policy in the mid-1980s. There has been some convergence in family sizes among the various educational groups, with the exception of those with below secondary education. However, the proportions childless or with only one child tend to increase with better education, rising from about 21 per cent among women with below secondary education to 28 per cent among university graduates.

Average No of Children Born and Percent Childless or with only One Child among Ever-Married Women Aged 40-49, 1990 and 2000

| | Number (Average) | | Childless (%) | | One child (%) | |
|-----------------|---------------------|------|------------------|------|------------------|------|
| | 1990 | 2000 | 1990 | 2000 | 1990 | 2000 |
| Below secondary | 3.0 | 2.4 | 4.1 | 5.4 | 8.7 | 12.6 |
| Secondary | 2.1 | 2.1 | 6.4 | 6.6 | 15.9 | 17.2 |
| Post-secondary | 2.1 | 2.0 | 6.1 | 8.0 | 15.2 | 18.4 |
| University | 2.0 | 1.9 | 7.8 | 9.4 | 15.9 | 18.6 |
| Total | 2.8 | 2.2 | 4.7 | 6.4 | 10.5 | 15.1 |

Source: Leow Bee Geok (2001), *Census of Population 2000 Advance Data Release*, Singapore Department of Statistics, Tables 6, 8 and 9.

Singlehood rates

As elsewhere (including Japan), the singlehood rates among men and women have been rising in Singapore. At ages 30-34, about one third of resident males and 20 per cent of resident females remained single in 2001. The proportion who are likely to remain single permanently have risen to about 15% for both sexes, up from 8 and 6 per cent in 1980. The rising singlehood rates have a depressing effect on fertility as childbearing in Singapore typically takes place within the context of marriage and there are strong negative social sanctions against out-of-wedlock births. According to Leow (2001), the rising singlehood trends have been moderated by immigration as new permanent residents tended to be married.

Proportion Single (%)

| | Males | | | Females | | |
|------|-------|-------|-------|---------|-------|-------|
| | 30-34 | 35-39 | 40-44 | 30-34 | 35-39 | 40-44 |
| 1980 | 21.3 | 10.5 | 8.1 | 16.6 | 8.5 | 5.9 |
| 1990 | 33.5 | 17.0 | 9.0 | 20.2 | 13.4 | 9.4 |
| 2000 | 31.3 | 20.4 | 14.7 | 19.4 | 15.0 | 13.7 |
| 2001 | 31.1 | 18.9 | 15.0 | 19.8 | 14.9 | 14.0 |

Source: *Twenty-Five Years of Below Replacement Fertility: Implications for Singapore*, Singapore Department of Statistics, 1 April 2002, Table 2 (www.singstat.gov.sg/papers/seminar/fertility.pdf).

As with fertility rates and family sizes, there are ethnic and educational differentials in singlehood rates. Singlehood rates are highest among the Chinese and lowest among Malays. With little exception, men with below secondary education and women with university degrees are more likely to remain single than other educational groups.

Proportion Single among Male and Female Citizens aged 35-44, 2000

| | Chinese | Malays | Indians |
|----------------|---------|--------|---------|
| Males | | | |
| Below Sec | 28.2 | 13.7 | 15.2 |
| Secondary | 18.4 | 9.0 | 10.9 |
| Post-Sec | 13.9 | 7.7 | 10.6 |
| University | 13.5 | 9.1 | 15.7 |
| Females | | | |
| Below Sec | 10.8 | 7.4 | 8.3 |
| Secondary | 16.5 | 8.2 | 9.9 |
| Post-sec | 22.1 | 13.8 | 14.9 |
| University | 29.2 | 25.4 | 14.1 |

Source: Leow Bee Geok (2001), *Census of Population 2000 Advance Data Release*, Singapore Department of Statistics, Table 4, p 64.

Later marriages and childbearing

The age at first marriage has risen for women of all ethnic and educational groups. Malay and Indian women showed the sharpest increase in age at marriage, rising by nearly five years between the 1961-70 marriage cohort and those who married thirty years later. There is a convergence in age at marriage among the differential educational groups, at around 26 years among those who married in the 1990s as the lower educated women increasingly delayed their marriage.

Average Age at First Marriage among Resident Ever-Married Female

| | Marriage Cohort | | | |
|------------|-----------------|---------|---------|-----------|
| | 1961-70 | 1971-80 | 1981-90 | 1991-2000 |
| Chinese | 23.3 | 24.3 | 26.1 | 26.9 |
| Malays | 19.9 | 21.7 | 23.5 | 24.8 |
| Indians | 20.3 | 22.1 | 24.0 | 25.3 |
| Others | 23.2 | 23.8 | 25.7 | 27.0 |
| | | | | |
| Below Sec | 22.4 | 23.6 | 25.3 | 26.9 |
| Secondary | 23.2 | 23.8 | 25.3 | 26.3 |
| Post-Sec | 24.6 | 24.6 | 25.9 | 26.3 |
| University | 25.3 | 25.2 | 26.3 | 26.9 |

Source: Leow Bee Geok (2001), Census of Population 2000 Advance Data Release, Singapore Department of Statistics, Table 5, p 66.

In line with the high age at marriage, Singaporean women also begin childbearing at a relatively older ages. The median age of mothers at first birth has been over 28 years over the last decade. Mothers were over thirty at second birth.

Median Age of Mother at First, Second and Third Births (years)

| | All | First | Second | Third |
|------|------|-------|--------|-------|
| 1990 | 29.3 | 27.5 | 29.8 | 32.1 |
| 2000 | 30.6 | 28.4 | 31.3 | 33.1 |
| 2001 | 30.7 | 28.6 | 31.3 | 33.2 |

Source: Tan Yeow Lip (2002), "Singapore's Current Population Trends", Statistics Singapore Newsletter September 2002, p 5 Table 5.

Ideational/Values Change

Studies have found that Singaporean men and women continue to value marriage and having children. The latest study on social attitudes towards the family, carried out in January-June 2001, found that 84 per cent of Singaporeans aged 15 and above agreed that *it is better to be married than to remain single* while 89 per cent agreed that *married couples should have children*. However, single females over age 30 were less positive about marriage than single males while the opposite was true for the younger age